

Serial No.: 10/669,479
Docket No.: GP-303584

Remarks

By this response, claims 13 and 42 have been amended. New matter has been entered. Accordingly, claims 13-42 are pending in this application.

Claim Rejection - 35 USC § 112

In the Office Action, claims 13 and 42 are rejected as being indefinite. This rejection to the noted claims has been overcome by the above amendments.

Claim Rejection - 35 USC § 102

In the Office Action, claims 13-22, 24, 28, 31, and 33-42 are rejected as anticipated by U.S. Pre-Grant Publication No. 2003/0224239, hereafter "Carlstrom." This rejection is respectively traversed in view of the following comments.

Carlstrom fails to disclose each and every limitation of the claimed invention. Nowhere in Carlstrom is it disclosed or suggested that a pitch of a cathode flow field plate, separated by a MEA, is less than the pitch of an anode flow field plate. The "pitch" of a flow field plate is defined in the specification as "the cross sectional width of the channel plus the cross sectional width of an adjacent land." See paragraph [0005] of the specification in the present invention. Unlike it has been suggested by the Examiner, although channel shape and design vary between the embodiments disclosed by Carlstrom, the pitch does not vary between plates of each embodiment. For example, see Exhibit A showing FIGS. 5-7 of Carlstrom marked up to point out that the pitch between the plates 502, 504 (FIG. 5), 602, 604 (FIG. 6), and 702, 704 (FIG. 7) of the illustrated embodiments are the same. In addition, even in the embodiment of Carlstrom, where only one of the plates 702 and 704 is provided with a ridge 706, 708 (see paragraph [0050]), such an embodiment still has the same pitch between the plates as is taught by Carlstrom in order to provide the illustrated mating between plates 702, 704 in FIG. 7.

Furthermore, nowhere in Carlstrom is it disclosed or suggested that a plate of one embodiment, for example, plate 505 (FIG. 5) can be paired up with the plate of another embodiment, for example, plate 608 (FIG. 6). However, even if one skilled was provided

Serial No.: 10/669,479
Docket No.: GP-303584

with such a suggested, such an embodiment would still not produce that claimed invention as Carlstrom is silent on the desire to vary the pitch between plates. In fact, none of the cited art provides such a desire. In view of the cited art, only impressive hindsight would provide such motivation to vary the pitch between plates.

Independent claim 13 recites, *inter alia*, the limitation of "a pitch defined by said first flow field plate is less than a pitch defined by said second flow field plate." Independent claim 42 recites, *inter alia*, the limitations of "said second channels define a cross sectional width approximately equal to a cross sectional width defined by said first channels, said second flow field plate defines a channel pitch substantially greater than a channel pitch defined by said first flow field plate." As Carlstrom fails to disclose or suggest such limitations, withdrawal of the rejection to the above noted claims is respectfully requested.

Claim Rejection - 35 USC § 103

In the Office Action, claims 23, 25-27, 29, 30 and 32 are rejected as being unpatentable over Carlstrom in view of Suzuki et al. U.S. Pre-Grant Publication No. 2002/0004158, hereafter "Suzuki et al." This rejection is respectively traversed in view of the following comments.

The above noted claims depend from claim 13, which as pointed out above, Carlstrom fails to teach the limitation of "a pitch defined by said first flow field plate is less than a pitch defined by said second flow field plate." As pointed out in Applicants' previous office action response, Suzuki et al. also fail to disclose or suggest that a pitch of a cathode flow field plate is less than the pitch of an anode flow field plate. A point that the Examiner has already conceded as persuasive. See paragraph 1, Response to Arguments. Therefore, as the combined teachings of Carlstrom and Suzuki et al. would fail to disclose or suggest the recited invention of independent claim 13, withdrawal of this rejection to dependent claims 23, 25-27, 29, 30 and 32 is respectfully requested.

Serial No.: 10/669,479
Docket No.: GP-303584

Conclusion

In view of the above amendments and remarks, Applicants respectfully submit that the present application is in condition for allowance. The Examiner is encouraged to contact the undersigned to resolve efficiently any formal matters or to discuss any aspects of the application or of this response. Otherwise, early notification of allowable subject matter is respectfully solicited.

Respectfully submitted,
Dinsmore & Shohl, LLP

By



William A. Jividen
Registration No. 42,695

One Dayton Centre
One South Main Street, Suite 1300
Dayton, Ohio 45402-2023
Telephone: (937) 449-6448
Facsimile: (937) 223-0724
e-mail: william.jividen@dinslaw.com
WAJ/

Encl: Exhibit A (2 pages)